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Dated: 10/18/04

Signature: Melody Almberg
(Melody Almberg)

Docket No.: 337348055US1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Sheffield et al.

Application No.: 10/731,892

Confirmation No.: 4677

Filed: December 9, 2003

Art Unit: 3762

For: METHODS FOR TREATING AND/OR
COLLECTING INFORMATION
REGARDING NEUROLOGICAL
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Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

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Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

A copy of each foreign patent and non-patent reference on the PTO/SB/08 is attached.

Our check in the amount of \$2,038.00 covering the fee set forth in 37 CFR , 1.17(a)(5), 1.16(e), 1.16(a), 1.16(c), and 1.16(b) is enclosed. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-0665, under Order No. 337348055US1. A duplicate copy of this paper is enclosed.

Dated: Oct. 18, 2004

Respectfully submitted,

By 

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PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/731,892-Conf. #4677
				Filing Date	December 9, 2003
				First Named Inventor	W. D. Sheffield
				Art Unit	3762
				Examiner Name	Not Yet Assigned
Sheet	1	of	6	Attorney Docket Number	337348055US1

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US-09/978,134		Gliner	
		US-2002-0087201	07-04-2002	Andrew Firlik	
		US-2002-0091419		Firlik	
		US-2002-0099412	07-25-2002	David Fischell	
		US-2002-0169485	11-14-2002	Benjamin Pless	
		US-2002/0028072	03-07-2002	Kashiyama	
		US-2002/0087201	07-04-2002	Firlik	
		US-2002/0091419-A1	07-11-2002	Firlik et al.	
		US-2002/0099412	07-25-2002	Fischell	
		US-2002/0169485	11-14-2002	Pless	
		US-2003-0149457-A1	08-07-2003	Tcheng et al.	
		US-2003-0187490	10-02-2003	Bradford Gliner	
		US-2003/0149457-A1	08-07-2003	Tcheng et al.	
		US-2003/0187490-A1	10-02-2003	B. Gliner	
		US-2004-0158298	08-12-2004	Bradford Gliner	
		US-3,650,276	03-21-1972	Burghele et al.	
		US-4,140,133	02-20-1979	Kastrubin et al.	
		US-4,431,000	02-14-1984	Butler et al.	
		US-4,542,752	09-24-1985	DeHaan et al.	
		US-4,607,639	08-26-1986	Tanagho et al.	
		US-4,646,744	03-03-1987	Capel	
		US-4,844,075	07-04-1989	Liss et al.	
		US-4,865,048	09-12-1989	Eckerson	
		US-5,002,053	03-26-1991	Garcia-Rill et al.	
		US-5,031,618	07-16-1991	Mullett	
		US-5,054,906	01-01-2001	WILLIAM G. LYONS	
		US-5,092,835	03-03-1992	Schurig et al.	
		US-5,143,089	09-01-1992	Alt	
		US-5,169,384	12-08-1992	Bosniak et al.	
		US-5,215,086	06-01-1993	Terry Jr. et al.	
		US-5,224,491	07-06-1993	Mehra	
		US-5,255,678	10-26-1993	Deslauriers et al.	
		US-5,263,967	01-01-2001	WILLIAM G. LYONS	
		US-5,304,206	04-19-1994	Baker, Jr. et al.	
		US-5,358,513	10-25-1994	Powell, III et al.	
		US-5,370,672	12-06-1994	Fowler et al.	
		US-5,411,540	05-02-1995	Edell et al.	
		US-5,417,719	05-23-1995	Hull et al.	
		US-5,423,864	06-13-1995	Ljungstroem	
		US-5,537,512	07-16-1996	Hsia et al.	
		US-5,540,736	07-30-1996	Haimovish et al.	
		US-5,549,655	08-27-1996	Erickson	
		US-5,575,813	01-01-2001	DAVID J. EDELL	
		US-5,591,216	01-07-1997	Testerman et al.	
		US-5,593,432	01-14-1997	Crowther et al.	
		US-5,628,317	05-13-1997	Starkebaum et al.	
Examiner Signature				Date Considered	

Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
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	US-5,683,422	11-04-1997	Rise	
	US-5,702,429	12-30-1997	King	
	US-5,711,316	01-27-1998	Elsberry et al.	
	US-5,713,922	02-03-1998	King	
	US-5,713,923	02-03-1998	Ward et al.	
	US-5,716,377	02-10-1998	Rise et al.	
	US-5,722,401	03-03-1998	Pietroski et al.	
	US-5,735,814	04-07-1998	Elsberry et al.	
	US-5,752,979	05-19-1998	Benabid	
	US-5,782,798	07-21-1998	Rise	
	US-5,792,186	08-11-1998	Rise	
	US-5,797,970	08-25-1998	Pouvreau	
	US-5,814,014	09-29-1998	Elsberry et al.	
	US-5,814,092	09-29-1998	King	
	US-5,824,021	10-20-1998	Rise	
	US-5,832,932	11-10-1998	Elsberry et al.	
	US-5,833,709	11-10-1998	Rise et al.	
	US-5,843,148	12-01-1998	JOHANNES T. M. GIJSBERS	
	US-5,843,148	12-01-1998	Gijsbers et al.	
	US-5,843,150	12-01-1998	Dreessen et al.	
	US-5,885,976	03-23-1999	Sandyk	
	US-5,886,769	03-23-1999	Zolten	
	US-5,893,883	04-13-1999	Torgerson et al.	
	US-5,904,916	05-18-1999	Hirsch	
	US-5,913,882	06-22-1999	King	
	US-5,925,070	07-20-1999	King et al.	
	US-5,938,688	08-17-1999	Schiff	
	US-5,938,689	08-17-1999	Fischell et al.	
	US-5,941,906	08-24-1999	Barreras, St. et al.	
	US-5,964,794	10-12-1999	Bolz et al.	
	US-5,975,085	11-02-1999	Rise	
	US-5,978,702	11-02-1999	Ward et al.	
	US-5,983,140	11-09-1999	Smith et al.	
	US-6,006,124	12-21-1999	Fischell et al.	
	US-6,011,996	01-04-2000	Gielen et al.	
	US-6,016,449	01-18-2000	Fischell et al.	
	US-6,018,682	01-25-2000	Rise	
	US-6,021,352	02-01-2000	Christopherson et al.	
	US-6,026,326	02-15-2000	Bardy	
	US-6,042,579	03-28-2000	Elsberry et al.	
	US-6,052,624	04-18-2000	Mann	
	US-6,055,456	04-25-2000	Gerber	
	US-6,057,847	05-02-2000	Jenkins??	
	US-6,058,331	05-02-2000	King	
	US-6,060,048	05-09-2000	Cherksey	
	US-6,061,593	05-09-2000	Fischell et al.	
	US-6,066,163	05-23-2000	John	
	US-6,104,956	08-15-2000	Naritoku et al.	
	US-6,104,960	08-15-2000	Duysens et al.	

Examiner Signature		Date Considered	
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Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
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Sheet	3	of	6	Attorney Docket Number	337348055US1

	US-6,122,548	09-19-2000	Starkebaum et al.	
	US-6,126,657	10-03-2000	Edwards et al.	
	US-6,128,537	10-03-2000	Rise	
	US-6,128,538	10-03-2000	Fischell et al.	
	US-6,134,474	10-17-2000	Fischell et al.	
	US-6,152,143	11-28-2000	Edwards	
	US-6,161,044	12-12-2000	Silverstone	
	US-6,161,045	12-12-2000	Fischell et al.	
	US-6,353,754	03-05-2002	Fischell et al.	
	US-6,354,299	03-12-2002	Fischell et al.	
	US-6,360,122	03-19-2002	Fischell et al.	
	US-6,366,813	01-01-2001	DANIEL JOHN DILORENZO	
	US-6,427,086	07-30-2002	Fischell et al.	
	US-6,459,936	12-27-2001	Fischell et al.	
	US-6,463,328	10-08-2002	MICHAEL SASHA JOHN	
	US-6,466,822	10-15-2002	Pless	
	US-6,473,568	03-07-2002	Ritsuo Kashiya	
	US-6,473,639	10-29-2002	Fischell et al.	
	US-6,480,743	11-12-2002	Kirkpatrick et al.	
	US-6,622,048	01-01-2001	Carla Mann	
	US-6,687,525	05-09-2002	Rodolfo Llinas	
	US-6,690,974	06-20-2002	Stephen Archer	
	US-60/325,872		Sheffield	
	US-60/325,978		Gliner	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
		WO 02/09811	02-07-2002	Neuropace, Inc.		
		WO 01/97906	12-27-2001	Advanced Bionics Corp		
		WO 02/38031	05-16-2002	Neuropace, Inc.		
		WO 87/07511	12-17-1987	Zion Educational Foundation		
		WO 03/043690	05-30-2003	Vertis Neuroscience, Inc.		
		WO 94/07564	04-14-1994	Cardiac Pacemakers, Inc.		
		WO 02/38217	05-16-2002	Neuropace, Inc.		
		WO 95/21591	08-17-1995	University of Iowa Research Foundation		
		WO 02/36003	05-10-2002	Neuropace, Inc.		
		WO 03/082402	03-20-2003	Vertis Neuroscience, Inc.		
		EP 1145736	10-17-2001	Neurospace, Inc.		
		EP-0 998 958-A2	10-05-2000	Medtronic Inc.		
		WO 98/06342	02-19-1998	Neotonus, Inc.		

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NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²	
		BEL, S. and BAUER, B.L., "Dorsal Column Stimulation (DCS): Cost to Benefit Analysis," Acta Neurochirurgica, Suppl. 52, pp. 121-123 (1991)		
		BENABID, A.L. et al., "Chronic electrical stimulation of the ventralis intermedialis nucleus of the thalamus as a treatment of movement disorders," J. Neurosurg., April 1997, 86(4); 737; http://www.ncbi.nlm.nih.gov ; [accessed 11/18/2003]		
		BUTEFISCH et al., "Mechanisms of use-dependent plasticity in the human motor cortex," Proc. Natl. Acad. Sci. USA, Vol. 97, No. 7, pp. 3661-3665 (March 2000)		
		CANAVERO, S. and PAOLOTTI, R., "Extradural Motor Cortex Stimulation for Advanced Parkinson's Disease: Case Report," Movement Disorders, 15(1):169-171, 2000		
		CINCOTTA et al., "Reorganization of the motor cortex in a patient with congenital hemiparesis and mirror movements," Neurology, Vol. 55, pp. 129-131 (2000)		
		CLASSEN, et al., "Rapid Plasticity of Human Cortical Movement Representation Induced by Practice," The Journal of Neurophysiology, Vol. 79, No. 2, pp. 1117-1123 (February 1998)		
		COHEN et al., "Studies of Neuroplasticity With Transcranial Magnetic Stimulation," The Journal of Clinical Neurophysiology, Vol. 15, No. 4 (1998)		
		CRAMER, S.C. and BASTINGS, E.P., "Mapping clinically relevant plasticity after stroke," Neuropharmacology Vol. 19, No. 5, pp. 842-851 (April 2000)		
		DAM et al., "Effects of Fluoxetine and Maprotiline on Functional Recovery in Poststroke Hemiplegic Patients Undergoing Rehabilitation Therapy," Stroke, Vol. 27, No. 7, pp. 1211-1214 (July 1996)		
		FEYS et al., "Value of somatosensory and motor evoked potentials in predicting arm recovery after a stroke," (October 1999)		
		FRANZINI et al., "Reversal of thalamic hand syndrome by long-term motor cortex stimulation," Journal of Neurosurgery 93:873-875 (2000)		
		GLADSTONE et al., "Enhancing Recovery after Stroke with Noradrenergic Pharmacotherapy: A New Frontier?," Can J. Neurol. Sci., Vol. 27, No. 2 (May 2000)		
		GORDON et al., "Parameters for direct cortical electrical stimulation in the human: histopathologic confirmation," Electroencephalography and clinical Neurophysiology, Vol. 75, pp. 371-377 (1990)		
		HODGE, JR., C.J. and BOAKYE, M., "Biological Plasticity: The Future of Science in Neurosurgery," Neurosurgery, Vol. 48, No. 1 (January 2001)		
		KAUHANEN et al., "Domains and Determinants of Quality of Life After Stroke Caused by Brain Infarction," Arch. Phys. Med. Rehabil., Vol. 81, pp. 1541-1546 (December 2000)		
		KOPELL et al., "The Continuing Evolution of Psychiatric Neurosurgery," CNS Spectrums, Vol. 5, No. 10, pp. 20-31 (October 2000)		
		LEVY et al., "Functional MRI Evidence of Cortical Reorganization in Upper-Limb Stroke Hemiplegia Treated with Constraint-Induced Movement Therapy," American Journal of Physical Medicine & Rehabilitation, Vol. 80, No. 1, pp. 4-7 (2001)		
		LIEPERT et al., "Treatment-Induced Cortical Reorganization After Stroke in Humans," Stroke, 31:1210-1216 (2000)		
Examiner Signature				Date Considered

Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
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Sheet	5	of	6	Attorney Docket Number	337348055US1

	MALENKA, R.C. and NICOLL, R.A., "Long-Term Potentiation - A Decade of Progress?," Neuroscience, Vol. 285, No. 5435, Issue of 17 September 1999, pp. 1870-1874	
	MARTINEZ et al., "Motor hand recovery after stroke Prognostic yield of early transcranial magnetic stimulation," Electromyography. Clin. Neurophysiology, Vol. 39, pp. 405-410 (1999)	
	NETZ et al., "Reorganization of motor output in the non-affected hemisphere after stroke," Brain, 120, pp. 1579-1586 (1997)	
	NITSCHKE, M.A. and PAULUS, W., "Excitability changes induced in the human motor cortex by weak transcranial direct current stimulation," The Journal of Physiology, Vol. 527.3, pp. 663-639 (2000)	
	OLIVERI et al., "Paired transcranial magnetic stimulation protocols reveal a pattern of inhibition and facilitation in the human parietal cortex," The Journal of Physiology, 529.2, pp. 461-468 (2000)	
	PASCUAL-LEONE et al., "Study and Modulation of Human Cortical Excitability With Transcranial Magnetic Stimulation," Journal of Clinical Neurophysiology, Vol. 15, No. 4 (1998)	
	PASCUAL-LEONE et al., "Transcranial magnetic stimulation and neuroplasticity," Neurophysiologia 37, pp. 207-217 (1999)	
	REZAI, "Neurostimulation," Neurological Research, Vol. 22, No. 3 pp. 235-273 (April 2000)	
	ROSSI et al., "Effects of Repetitive Transcranial Magnetic Stimulation on Movement-related Cortical Activity in Humans," Cerebral Cortex, Vol. 10, No. 8, pp. 802-808 (August 2000)	
	ROUX et al., "Chronic Motor Cortex Stimulation for Phantom Limb Pain: A Functional Magnetic Resonance Imaging Study: Technical Cast Report," Neurosurgery, Vol. 49, No. 3 (March 2001)	
	SAITOU et al., "Cerebral Blood Volume and Oxygenation Among Poststroke Hemiplegic Patients: Effects of 13 Rehabilitation Tasks Measured by Near-Infrared Spectroscopy," Arch. Phys. Med. Rehabil., Vol. 81 pp. 1348-1356 (October 2000)	
	SANDKUHLER, "Learning and memory in pain pathways," Pain 88, pp. 113-118 (2000)	
	SANES, "The Relation between Human Brain Activity and Hand Movements," NeuroImage 11, pp. 370-374 (2000)	
	SANES, J.N. and DONOGHUE, J.P., "Plasticity and Primary Motor Cortex," Annu. Rev. Neurosci. 23:393-415 (2000)	
	SCHIFF et al., "A neuromodulation strategy for rational therapy of complex brain injury states," Neurological Research, Vol. 22 pp. 267-272 (April 2000)	
	SHIMIZU et al., "Therapeutic efficacy of transcranial magnetic stimulation for hereditary spinocerebellar degeneration," Tohoku Journal of Experimental Medicine, 189(3):203-11 (November 1999)	
	SIEBNER et al., "Lasting cortical activation after repetitive TMS of the motor cortex," NEUROLOGY 54, pp. 956-963 (February 2000)	
	STEFAN et al., "Introduction of plasticity in the human motor cortex by paired associative stimulation," Brain, Vol. 123, No. 3, pp. 575-584 (March 2000)	
	TURTON et al., "Contralateral and ipsilateral EMG responses to transcranial magnetic stimulation during recovery of arm and hand function after stroke," Electroencephalography and Clinical Neurophysiology 101 pp. 316-328 (1996)	
	TURTON, A. and LEMON, R.N., "The contribution of fast corticospinal input to the voluntary activation of proximal muscles in normal subjects and in stroke patients," Exp. Brain Res., Vol. 129, pp. 559-572 (1999)	
	VAN DER LEE et al., "The Intra- and Interrater Reliability of the Action Research Arm Test: A Practical Test of Upper Extremity Function in Patients With Stroke," Arch. Phys. Med. Rehabil., Vol. 82 pp. 14-19 (January 2001)	
	WALKER-BATSON et al., "Amphetamine Paired With Physical Therapy Accelerates Motor Recovery After Stroke," Stroke, Vol. 26, No. 12, pp. 2254-2259 (1995)	
	ZIEMANN et al., "Modulation of Plasticity in Human Motor Cortex after Forearm Ischemic	
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		Nerve Block," The Journal of Neuroscience 18(3):1115-1123 (February 1998)	
		ZIEMANN et al., "Modulation of Plasticity in Human Motor Cortex after Forearm Ischemic Nerve Block," The Journal of Neuroscience, Vol. 18, No. 3, pp. 1115-1123 (February 1998)	

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